

US EPA RECORDS CENTER REGION 5



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Monthly Oversight Report 32  
ACS NPL Site  
Griffith, Indiana  
August 2, 2003 - August 29, 2003

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8/2/03



# BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/RAC VII  
American Chemical Services RAO (057-ROBF-05J7)

BVSPC Project 46526  
BVSPC File C.3  
September 8, 2003

Mr. Kevin Adler  
U.S. Environmental Protection Agency  
77 W. Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report  
No. 32 for August 2003

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 32 for August 2003 for the American Chemical Services Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email ([campbelllm@bv.com](mailto:campbelllm@bv.com)).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.  
Site Manager

Enclosure

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**Monthly Oversight Summary Report No. 32**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Month of August (August 2, 2003 - August 29, 2003)

**BVSPC O/S Dates:** August 8, 18, and 26, 2003

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Independent Environmental Services	2	Specialty Contractor
Austgen	1	Electrical Contractor
Ryan Construction	2	General Contractor
Fliteway	1	ONCA SBPA ISVE System Blower Shed Contractor
Environmental Contractors of Illinois	5	OFCA Engineered Cover Contractor
Area Survey	2	Surveying Contractor
Cochrane Compressor	2	Compressor Maintenance Contractor
Midwest Environmental, Inc.	6	OFCA Engineered Cover Erosion Repair Contractor

**Construction Activities**

**Major Activities:**

- Ryan Construction repaired the damage that it caused to the American Chemical Services employee breakroom building.
- Fliteway installed a vibration damper between the condensate knockout tank and blower in the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system blower shed building #1.
- Area Survey surveyed the gravel portion of the On-Site Containment Area Still Bottoms Pond Area interim cover.

- Environmental Contractors of Illinois added topsoil and seeded a portion of the Off-Site Containment Area engineered cover where the topsoil cover did not meet the design thickness.
- Midwest Environmental repaired the erosion damage to the Off-Site Containment Area engineered cover.
- Montgomery Watson Harza operated the Off-Site Containment Area and On-site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction systems intermittently during the reporting period.
- Montgomery Watson Harza reported that the groundwater treatment plant sustained damage to several control panels and components after being struck by lightning on August 1, 2003.
- Independent Environmental Services and Austgen performed maintenance activities in the groundwater treatment plant.
- Cochrane Compressor replaced a compressor head for an air compressor at the groundwater treatment plant.
- Ryan Construction installed additional piping at the groundwater treatment plant in preparation for the installation of a nanofiltration unit.
- Montgomery Watson Harza held bi-weekly construction coordination meetings at the site on August 7 and 21, 2003.

#### **Activities Performed:**

Ryan Construction repaired the damage it caused to the American Chemical Services employee breakroom building during the installation of the concrete retaining wall last reporting period. On August 15, 2003, Fliteway installed a vibration damper between the condensate knockout tank and the blower in the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system blower shed building. Area Survey surveyed the elevation and extent of the gravel portion of the ONCA SBPA interim cover on August 19, 2003.

Starting August 18, 2003, Environmental Contractors of Illinois (ECI) added topsoil to portions of the Off-Site Containment Area (OFCA) engineered cover where the thickness of the topsoil previously placed in the fall of 2002 did not meet the design requirement. These areas were located primarily near former swale 5, the eastern and northern portion of the OFCA, and the northeastern portion of the Kapica-Pazmey area of the OFCA. ECI scarified the ground and placed the topsoil in a 25-foot by 25-foot area where the thickness did not meet the requirement. ECI then re-seeded the filled area, placed straw on the areas, and demobilized from the site on August 19, 2003. ECI resurveyed the elevation of the topsoil layer to confirm that the thickness of topsoil met the design requirement.

Midwest Environmental, Inc. (MEI) repaired the erosion damage to the OFCA engineered cover during the week of August 25, 2003. MEI removed the vegetation and soil from the perimeter swales. Excess soil was stockpiled near the wood piles on the OFCA. MEI also trenched a shallow trench through swales 2 and 4 in order to install a 4-inch-diameter perforated, geotextile wrapped drainage pipe in the swales to facilitate drainage and minimize ponding near extraction well EW-20C. MEI also installed erosion matting along the western edge of the OFCA at swale 1 near extraction well EW-12.

Montgomery Watson Harza (MWH) reported that it operated the ONCA SBPA and OFCA ISVE systems intermittently during the reporting period. MWH reported that it replaced a faulty pH probe in Thermal Oxidizer Unit 2 on August 15, 2003. MWH began operating Thermal Oxidizer Unit 2 consistently with vapors from the ONCA SBPA ISVE system on August 25, 2003. MWH also reported that it encountered operation problems with operating Thermal Oxidizer Unit 1 during the week of August 25, 2003. MWH reported that the unit was unable to operate at the design temperature. MWH reported that the OFCA ISVE system did not operate at the end of the month because of the operational problems with Thermal Oxidizer Unit 1. MWH also reported that it will attempt to operate both the ONCA SBPA and OFCA ISVE systems, processing the vapor through Thermal Oxidizer Unit 2, next month.

MWH reported that the groundwater treatment plant (GWTP) was struck by lightning on the evening of August 1, 2003. MWH reported that it did not receive an alert page that the GWTP was down. MWH discovered that the GWTP was not operating when it returned to the site on August 4, 2003. MWH reported that the lightning damaged several components and control panels in the GWTP. Austgen Electric began troubleshooting the problems and has resolved the majority of the problems. MWH operated the GWTP at 10 gpm during the week of August 11, 2003, primarily pumping from monitoring wells MW-56 and MW-10C because of control problems with the barrier wall extraction system and perimeter groundwater containment system wells.

MWH shut the GWTP down during the week of August 18, 2003, for scheduled maintenance activities. Independent Environmental Services (IES) and Austgen performed the maintenance activities on the GWTP. IES cleaned tank T-102, the aeration/equalization tank, a permit required confined space. IES wore a half-face respirator and tyvek suit to perform the confined space work. IES continuously ventilated the tank and performed air monitoring for the lower explosive limit (LEL) and oxygen, carbon monoxide, and hydrogen sulfide levels. IES reported that the oxygen level was within normal range and that the concentration of hydrogen sulfide and carbon monoxide were 1 ppm and 0 ppm, respectively. IES also reported that the LEL was less than 10%. IES and Austgen cleaned the clarifier, replaced the sand in the 1500-gallon-capacity sand filters, and performed other maintenance activities. MWH reported that IES and Austgen were unable to remove the air lift pump in the large sand filter; however, it would continue work on the pump on September 2, 2003. Cochrane Compressor replaced the compressor head for one of the air compressors at the GWTP on August 18, 2003. MWH operated the GWTP in recirculation mode for the remainder of the reporting period.

MWH reported that it will install a nanofiltration unit in the GWTP to reduce the hardness of the water used in the ISVE system scrubbers to prevent clogging of the nozzles and piping. Ryan Construction began installing piping in preparation for the nanofiltration unit on August 26, 2003. MWH reported that the nanofiltration unit is scheduled to be delivered to the site on September 5, 2003.

Attached are BVSPC weekly reports No. 127 through 130, correspondence, log book notes, and photographs of the daily activities. BVSPC's crew conducted oversight of the major field activities on August 8, 18, and 26, 2003. BVSPC's crew participated in two bi-weekly construction coordination meetings on August 7 and 21, 2003, via conference call because of construction inactivity at the site.

**Topics of Concern:**

- None to report.

**Concern Resolution:**

- None to report.

**Upcoming Activities:**

- MWH to begin operating the OFCA SBPA ISVE system.
- MWH to resume operating the GWTP.
- MWH to install the nanofiltration unit.
- MWH to perform the semiannual groundwater and annual residential well sampling events.

Signature: Leigh Peters

Date: September 5, 2003

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**Weekly Oversight Summary Report No. 127**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of August 4, 2003.

**BVSPC O/S Dates:** August 8, 2003 (Mr. Campbell).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	2	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Ryan Construction	2	General Contractor
Austgen Electric	1	Electrical Contractor

**Construction Activities**

**Major Activities:**

- Ryan Construction repaired the damage it caused to the American Chemical Services employee breakroom building.
- Montgomery Watson Harza reported that the groundwater treatment plant sustained damage to several control panels after being struck by lightning.
- Austgen began repairing damage to the groundwater treatment plant control panels and components.
- Montgomery Watson Harza held the bi-weekly construction coordination meeting on August 7, 2003.

**Activities Performed:**

Ryan Construction repaired the damage it caused to the American Chemical Services (ACS) employee breakroom building during the installation of the concrete retaining wall.

Montgomery Watson Harza (MWH) reported that the groundwater treatment plant (GWTP) was struck by lightning on the evening of August 1, 2003. MWH reported that it did not receive an alert page that the GWTP was down. MWH discovered that the GWTP was not operating when it returned to the site on August 4, 2003. MWH reported that the lightning damaged several components and control panels. Austgen Electric began troubleshooting the control programming logic and repairing the damaged components. MWH and Austgen were able to resolve the majority of the programming problems and began operating the GWTP at a reduced flow rate of 10 gpm. MWH reported that it scheduled a shut down of the GWTP for August 18, 2003, in order to perform maintenance on several units within the plant.

MWH reported that the Off-Site Containment Area (OFCA) and On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) systems were not operating because of the damage to the GWTP. MWH reported that it was able to bring Thermal Oxidizer Unit 2 back up to temperature on August 7, 2003. MWH reported that it anticipated being able to operate the ONCA SBPA ISVE system consistently and begin monitoring the system in accordance with its *Performance Standard Verification Plan* by the end of the week. MWH also reported that it encountered communication problems with Thermal Oxidizer Unit 1. MWH began resolving the communication problems and reported that it would begin operating the OFCA ISVE system with Thermal Oxidizer Unit 2 in the interim.

MWH held the bi-weekly construction coordination meeting at the site on August 7, 2003. Black & Veatch Special Projects Corporation participated in the meeting via conference call because of limited construction activities.

**Topics of Concern:**

- None to report.

**Concern Resolution:**

- None to report.

**Upcoming Activities:**

- MWH to begin operating the ONCA SBPA ISVE system consistently and perform monitoring of the system.
- Environmental Contractors of Illinois to add topsoil and reseed the OFCA engineered cover.
- Midwest Environmental, Inc. to perform maintenance activities to address erosional damage to the OFCA engineered cover.
- MWH to perform maintenance activities in the GWTP.

Signature: Leigh Peters

Date: August 15, 2003

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**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR AUGUST 7, 2003 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Thursday, August 7, 2003

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**ATTENDEES:** Kevin Adler – U.S. EPA (via telephone)  
Aaron Potts – Environ (via telephone)  
Tom Tinics – MWH  
Leigh Peters – BVSPC (via telephone)  
Lee Orosz – MWH  
Jon Pohl – MWH (via telephone)  
Chris Daly – MWH (via telephone)

**TOPICS:**

Health and Safety Summary

No health and safety incidents have occurred at the Site since the last meeting on July 24, 2003. Activities at the site during the past two weeks included the continued operation of the groundwater treatment plant (GWTP), operation of the Off-Site Area In-situ Soil Vapor Extraction (ISVE) system and the Still Bottoms Pond Area (SBPA) ISVE system, construction of a stormwater diversion berm around the ACS breakroom building, and repair of minor damage done to the breakroom building when a subcontractor backed into it.

Groundwater Treatment Plant (GWTP) Status

The GWTP operated at approximately 20 gallons per minute (gpm) until August 1<sup>st</sup> when the plant building was struck by lightning. The lightning damaged some of the control and communication systems causing the plant to shut down. Because the communication system was damaged, no alert was sent out that the GWTP was down. However, the system shutdown successfully and there was no release from the system. The GWTP was brought back online on August 4<sup>th</sup> with an extraction rate of approximately 10 gpm. A subcontractor of Austgen Electric has been onsite repairing the damaged control and communication components. Approximately 70 percent of the problems caused by the lightning strike have been corrected.

The GWTP is scheduled to be offline beginning August 18<sup>th</sup> for routine maintenance. Maintenance will include cleaning tank T-102 and checking the diffusers, cleaning the clarifier, and changing out the sand in the sandfilters. The tasks involved in cleaning T-102 will involve a confined space entry, which will be performed with the assistance of

Independent Environmental Services (IES). It is anticipated that the maintenance work will be completed by August 20<sup>th</sup>.

#### Off-Site Area/SBPA ISVE Systems

The Off-Site Area ISVE has been operating on an intermittent basis for the past two weeks. The vapors from this system are being sent to Thermal Oxidizer/Scrubber Unit 1 (Therm Ox 1). The SBPA ISVE ran consistently during the week of July 28<sup>th</sup> until the plant was struck by lightning. The system was brought back online on August 4<sup>th</sup> along with the GWTP. All the wells for the SBPA ISVE system are open. Monitoring of the system will begin when the system operation is stabilized. Vapors from the SBPA ISVE system are being sent to Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2).

#### SBPA Cover

Ryan Construction was onsite July 28<sup>th</sup> to complete the construction of the concrete berm around the ACS breakroom building to divert stormwater around the building and eliminate the potential for flooding during heavy rain events. Ryan was onsite again on August 6<sup>th</sup> to repair minor damage caused to the breakroom building during the construction of the concrete berm.

Erosion of the gravel in the SBPA cover area has been observed after heavy rainfall occurred at the Site. The erosion damage was repaired using a skid loader. Future erosion of the gravel will be repaired in the same manner until the asphalt layer (final cover) is placed.

#### Off-Site Area Cover

Midwest Environmental, Inc. (MEI) has been selected as the contractor to repair the erosion areas in the Off-Site Area cover and MWH has ordered the material necessary for the work. This work will be completed within the next two weeks.

Environmental Contractors of Illinois (ECI) is scheduled be onsite the week of August 18<sup>th</sup> to add topsoil to areas of the Final OFCA Cover that did not meet the minimum topsoil thickness requirement. It is anticipated that this work will take approximately one week to complete.

**Looking Ahead**

Week of August 11, 2003	<ul style="list-style-type: none"><li>• GWTP/BWES/PGCS operation</li><li>• Off-Site ISVE operation</li><li>• SBPA ISVE operation</li></ul>
Week of August 18, 2003	<ul style="list-style-type: none"><li>• Off-Site ISVE operation</li><li>• SBPA ISVE operation</li><li>• Maintenance work in the GWTP</li><li>• MEI will repair areas of erosion damage in the OFCA Cover Area</li><li>• ECI will complete addition of topsoil to low areas in the OFCA Cover Area</li></ul>
Health and Safety Items to Monitor	<u>Items include:</u> <ul style="list-style-type: none"><li>• Confined space entry to clean T-102</li><li>• Traffic related to work in the OFCA</li></ul>

Next Weekly Construction Meeting - Thursday, August 21, 2003, 10 a.m.

JDP/CAD/PJV

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**Weekly Oversight Summary Report No. 128**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of August 11, 2003.

**BVSPC O/S Dates:** Cancelled because of limited construction activities.

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	2	Respondent's General Contractor
Fliteway	2	ONCA SBPA ISVE System Blower Shed Contractor

**Construction Activities**

**Major Activities:**

- Fliteway installed a vibration damper between the condensate knockout tank and blower in the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system blower shed building #1.
- Montgomery Watson Harza resumed operating the Off-Site Containment Area in-situ soil vapor extraction system, processing vapors through Thermal Oxidizer Unit 1.

**Activities Performed:**

Fliteway installed a vibration damper between the condensate knockout tank and the blower in the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system blower shed building #1 on August 15, 2003. Montgomery Watson Harza (MWH) reported that it encountered system faults with the pH probe in Thermal Oxidizer Unit 2. MWH ordered a replacement probe and installed it on August 15, 2003. MWH anticipated operating the ONCA SBPA ISVE system and Thermal Oxidizer Unit 2 next week after the maintenance activities are complete in the groundwater treatment plant (GWTP). MWH reported that it resumed operating the Off-Site Containment Area (OFCA) ISVE system, processing vapors through Thermal Oxidizer Unit 1.

MWH reported that it resumed operation of the GWTP and continued to repair the damage sustained by the plant after being struck by lightning on August 1, 2003. MWH reported that the GWTP operated at 10 gpm, pumping water primarily from monitoring wells MW-10C and MW-56. MWH reported that the control systems for the barrier wall extraction system and perimeter groundwater containment system required additional repair. MWH also reported that the shut down of the GWTP is still scheduled August 18, 2003, in order to perform maintenance on several units within the plant. MWH reported that the maintenance activities will include cleaning of the aeration/equalization tank T-102, cleanout of the clarifier, replacement of the sand in the 1500-gallon-capacity sand filters, and repair of the air lift in the large sand filter. MWH also reported that it expects to resume operating the GWTP on August 20, 2003.

MWH reported that on August 18, 2003, Environmental Contractors of Illinois (ECI) is scheduled to add topsoil and reseed areas of the OFCA engineered cover where the thickness of topsoil does not meet the design requirements. MWH also reported that Midwest Environmental, Inc. (MEI) will begin repairing the erosion damage to the OFCA cover on August 25, 2003.

**Topics of Concern:**

- None to report.

**Concern Resolution:**

- None to report.

**Upcoming Activities:**

- MWH to begin operating the ONCA SBPA ISVE system consistently and perform monitoring of the system.
- ECI to add topsoil and reseed the OFCA engineered cover.
- MEI to perform maintenance activities to address erosional damage to the OFCA engineered cover.
- MWH to perform maintenance activities in the GWTP.

Signature: Leigh Peters

Date: August 19, 2003

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**Weekly Oversight Summary Report No. 129**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of August 18, 2003.

**BVSPC O/S Dates:** August 18, 2003 (Ms. Peters).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	1	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Environmental Contractors of Illinois	5	OFCA Engineered Cover Contractor
Independent Environmental Services	3	Specialty Contractor
Austgen	1	Electrical Contractor
Cochrane Compressor	2	Compressor Contractor
Area Survey	2	Surveying Contractor

**Construction Activities**

**Major Activities:**

- Environmental Contractors of Illinois added topsoil and seeded a portion of the Off-Site Containment Area engineered cover where the topsoil cover did not meet the design requirements.
- Independent Environmental Services and Austgen performed maintenance activities in the groundwater treatment plant.
- Cochrane Compressor replaced a compressor head for an air compressor at the groundwater treatment plant.
- Area Survey surveyed the gravel portion of the On-Site Containment Area Still Bottoms Pond Area interim cover.
- Montgomery Watson Harza held the weekly construction coordination meeting on August 21, 2003.

**Activities Performed:**

Starting August 18, 2003, Environmental Contractors of Illinois (ECI) added topsoil to portions of the Off-Site Containment Area (OFCA) engineered cover where the thickness of the topsoil previously placed in fall 2002 did not meet the design requirement. These areas were located primarily near former swale 5,

the eastern and northern portions of the OFCA, and the northeastern portion of the Kapica-Pazmey area of the OFCA. ECI scarified the ground and placed the topsoil in a 25-feet by 25-feet area where the thickness did not meet the requirements. ECI then re-seeded the filled areas and demobilized from the site on August 19, 2003. ECI resurveyed the elevation of the topsoil layer to confirm that the thickness of topsoil met the design requirements.

Montgomery Watson Harza (MWH) shut down the groundwater treatment plant (GWTP) on August 18, 2003, as previously scheduled in order for Independent Environmental Services (IES) and Austgen to perform maintenance on several units within the GWTP. IES cleaned tank T-102, the aeration/equalization tank, a permit required confined space. IES wore a half-face respirator and tyvek suit to perform the confined space work. IES continuously ventilated the tank and performed air monitoring for the lower explosive limit (LEL) and oxygen, carbon monoxide, and hydrogen sulfide levels. IES reported that the oxygen level was within normal range and that the concentration of hydrogen sulfide and carbon monoxide were 1 ppm and 0 ppm, respectively. IES also reported that the LEL was less than 10%. IES and Austgen cleaned the clarifier, replaced the sand in the 1500-gallon-capacity sand filters, and performed other maintenance activities. Cochrane Compressor replaced the compressor head for one of the air compressors at the GWTP on August 18, 2003.

Area Survey surveyed the top of the gravel cover in the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA). MWH reported that Ryan Construction completed the repairs to the American Chemical Services (ACS) employee breakroom building wall; however, the door still needs to be replaced.

MWH reported that it repaired approximately 95% of the damage to the GWTP that had been caused by the lightening strike on August 1, 2003. MWH also reported that it will resume pumping from the barrier wall extraction system wells in addition to monitoring wells MW-10C and MW-56 next week. MWH reported that because of the reduced pumping, the water level in the ONCA SBPA has risen approximately 3 feet. MWH also reported that the water levels in the OFCA did not change significantly.

MWH did not operate the ONCA SBPA and OFCA in-situ soil vapor extraction (ISVE) systems during the week, while maintenance activities were conducted in the GWTP. MWH reported that it will resume operating the ISVE systems next week. MWH also reported that it will be installing a nanofiltration unit in the GWTP to reduce the hardness of the water used in the ISVE system scrubbers to prevent clogging of the nozzles and piping. MWH reported that the unit will be delivered to the site on September 5, 2003, and that Ryan Construction will be onsite next week to install additional piping in the GWTP.

MWH reported that Midwest Environmental, Inc. (MEI) would begin repairs to the erosion in the OFCA next week. MEI will be removing vegetation and soil from the swales, adding erosion fabric along swale 3, and will also mitigate the ponding water in swale 4 near extraction well EW-20C.

MWH held the bi-weekly construction coordination meeting at the site on August 21, 2003. Black & Veatch Special Projects Corp. participated in the meeting via conference call because of the construction inactivity at the site.

**Topics of Concern:**

- None to report.

**Concern Resolution:**

- None to report.

**Upcoming Activities:**

- MWH to begin operating the OFCA and ONCA SBPA ISVE systems.
- MEI to perform maintenance activities to address erosional damage to the OFCA engineered cover.
- MWH to resume operating the GWTP.
- MWH to install the nanofiltration unit.

Signature: Leigh Peters

Date: September 2, 2003

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**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR AUGUST 21, 2003 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Thursday, August 21, 2003

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**ATTENDEES:** Kevin Adler – U.S. EPA (via telephone)  
Larry Campbell – BVSPC (via telephone)  
Lee Orosz – MWH  
Chris Daly – MWH  
Rob Adams – MWH (via telephone)  
Todd Lewis – MWH (via telephone)  
Jon Pohl – MWH (via telephone)

**TOPICS:**

**Health and Safety Summary**

No health and safety incidents have occurred at the Site since the last meeting on August 7, 2003. Activities at the site during the past two weeks included the continued operation of the groundwater treatment plant (GWTP), routine maintenance of the GWTP including confined space entries, operation of the Off-Site Area In-situ Soil Vapor Extraction (ISVE) system and the Still Bottoms Pond Area (SBPA) ISVE system, additional topsoil placement in the Off-Site Cover Area, and repair of minor damage done to the ACS breakroom building when a subcontractor backed into it.

**Groundwater Treatment Plant (GWTP) Status**

The GWTP operated at approximately 10 gallons per minute (gpm) during the week of August 11<sup>th</sup>. The plant influent was drawn mainly from wells MW-56 and MW-10C during this week. Influent from the perimeter groundwater containment system (PGCS) and barrier wall extraction system (BWES) was limited due control system problems caused by lightning striking the GWTP building on August 1<sup>st</sup>. Approximately 95 percent of the electrical and control problems caused by the lightning strike have been corrected. The GWTP was shut down on August 18<sup>th</sup> in order to perform routine maintenance that included emptying and cleaning multiple tanks. The plant is scheduled to be brought back online on either August 22<sup>nd</sup> or 25<sup>th</sup>.

Routine water levels measured at various locations indicated that the groundwater elevation has risen within the barrier wall during the last few weeks while the GWTP has been operating intermittently. Water levels in the Off-Site Area did not change significantly. However, the water levels in the SBPA rose an average of approximately

three feet. This rise in the SBPA is also attributable to the heavy rainfall at the Site during the last few weeks.

#### Off-Site Area/SBPA ISVE Systems

Both ISVE systems operated intermittently during the week of August 11<sup>th</sup> with Thermal Oxidizer/Scrubber Unit 1 (Therm Ox 1) treating the vapors from the Off-Site Area ISVE system and Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2) treating the vapors from the SBPA ISVE system. Therm Ox 2 was brought online August 19<sup>th</sup> and has been operating consistently since that date. Therm Ox 1 was also brought online August 19<sup>th</sup> but a high pressure alarm caused the unit to shut down late on August 20<sup>th</sup>. Austgen Electric is scheduled to be onsite during the week of August 25<sup>th</sup> to correct the pressure control problem in Therm Ox 1.

The nanofiltration unit is scheduled to be shipped to the site on September 5<sup>th</sup>. Prior to it's delivery, piping and controls reconfigurations will be completed to accommodate the unit.

#### SBPA Cover

Ryan Construction has completed the repairs to the ACS breakroom building siding that was damaged during the construction of the concrete berm around the building to divert stormwater.

MWH plans to clean gravel from the stormwater catch basins on the perimeter of the cover area. Once the gravel is removed, erosion control matting will be placed over the catch basin to limit future erosion in these areas. Periodic maintenance of the gravel will be performed to fix future erosion that occurs prior to placement of the asphalt layer in 2004. A survey of the gravel layer was completed by Area Survey on August 19<sup>th</sup>. The contours of the gravel layer will be included in a figure in the SBPA Interim Engineered Cover Construction Completion Report.

Tom Froman of ACS has informed MWH that there are several concerns regarding ACS' restriction from driving in certain areas of the SBPA. MWH will review the ACS concerns and respond to Mr. Froman.

#### Off-Site Area Cover

Environmental Contractors of Illinois (ECI) was on-site on August 18<sup>th</sup> and 19<sup>th</sup> to place additional topsoil in areas of the Off-Site engineered cover area that did not meet the thickness requirements for topsoil following construction. The ground in each area was scarified, ECI placed and compacted additional topsoil from Austgen Equipment with a seeding tractor, seed was applied, and straw was placed. Surveys were completed before and after the work to confirm that a sufficient amount of topsoil was placed.

Midwest Environmental, Inc. (MEI) is scheduled to be on-site on August 25<sup>th</sup> to repair the erosion areas in the Off-Site Area cover. MWH will submit a response to Agency comments regarding the erosion repair work plan on August 22<sup>nd</sup>.

**Looking Ahead**

Week of August 25, 2003	<ul style="list-style-type: none"><li>• GWTP/BWES/PGCS operation</li><li>• Off-Site ISVE operation</li><li>• SBPA ISVE operation</li><li>• Complete GWTP repairs and maintenance</li><li>• Electrical and control repairs and upgrades</li></ul>
Week of September 1, 2003	<ul style="list-style-type: none"><li>• Off-Site ISVE operation</li><li>• SBPA ISVE operation</li><li>• Reconfigure piping and controls to accommodate the nanofiltration unit</li></ul>
Health and Safety Items to Monitor	<u>Items include:</u> <ul style="list-style-type: none"><li>• Use of equipment for repairs and upgrades</li><li>• Electrical hazards associated with upgrades and repairs</li></ul>

Next Bi-weekly Construction Meeting - Thursday, September 4, 2003, 10 a.m.

JDP/RAA/PJV

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**Weekly Oversight Summary Report No. 130**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of August 25, 2003.

**BVSPC O/S Dates:** August 26, 2003 (Mr. Campbell).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	2	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Midwest Environmental, Inc.	6	OFCA Engineered Cover Erosion Repair Contractor
Ryan Construction	2	General Contractor

**Construction Activities**

**Major Activities:**

- Midwest Environmental, Inc. repaired the erosion damage to the Off-Site Containment Area engineered cover.
- Montgomery Watson Harza resumed operating the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Ryan Construction installed additional piping at the groundwater treatment plant in preparation for the installation of a nanofiltration unit.
- Montgomery Watson Harza operated the groundwater treatment plant in recirculation mode.

**Activities Performed:**

Midwest Environmental, Inc. (MEI) repaired the erosion damage to the Off-Site Containment Area (OFCA) engineered cover. MEI removed the vegetation and soil from the perimeter swales. MEI stockpiled excess soil near the wood piles on the OFCA. MEI also trenched a shallow trench through swales 2 and 4 in order to install a 4-inch-diameter perforated, geotextile wrapped drainage pipe in the swales to facilitate drainage and minimize ponding at extraction well EW-20C. MEI also installed erosion matting along the western edge of the cover at swale 1 near extraction well EW-12.

Montgomery Watson Harza (MWH) resumed operating the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system, processing vapors in Thermal Oxidizer Unit 2. MWH reported that it began operating the OFCA ISVE system, processing the vapors in Thermal Oxidizer Unit 1; however, the oxidizer shut down when it reached the operating temperature.

**Looking Ahead**

Week of August 11, 2003	<ul style="list-style-type: none"><li>• GWTP/BWES/PGCS operation</li><li>• Off-Site ISVE operation</li><li>• SBPA ISVE operation</li></ul>
Week of August 18, 2003	<ul style="list-style-type: none"><li>• Off-Site ISVE operation</li><li>• SBPA ISVE operation</li><li>• Maintenance work in the GWTP</li><li>• MEI will repair areas of erosion damage in the OFCA Cover Area</li><li>• ECI will complete addition of topsoil to low areas in the OFCA Cover Area</li></ul>
Health and Safety Items to Monitor	<u>Items include:</u> <ul style="list-style-type: none"><li>• Confined space entry to clean T-102</li><li>• Traffic related to work in the OFCA</li></ul>

Next Weekly Construction Meeting - Thursday, August 21, 2003, 10 a.m.

JDP/CAD/PJV

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MWH reported that it was unable to operate the OFCA ISVE system with Thermal Oxidizer Unit 1 and that it would investigate the cause for the operational errors.

Ryan Construction began installing piping in preparation for the nanofiltration unit scheduled to be delivered to the site on September 5, 2003. MWH began operating the groundwater treatment plant (GWTP) in recirculation mode. MWH reported that it was unable to remove and repair the air lift pump in the large sand filter unit in the GWTP last week.

**Topics of Concern:**

- None to report.

**Concern Resolution:**

- None to report.

**Upcoming Activities:**

- MWH to begin operating the OFCA SBPA ISVE system.
- MWH to resume operating the GWTP.
- MWH to install the nanofiltration unit.
- MWH to perform the semiannual groundwater and annual residential well sampling events.

Signature: Leigh Peters

Date: September 2, 2003

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(142)

8 Aug 03

2130pm Arrive on site - partly  
cloudy, warm 78°F

Personnel on site

Lee O'Leary MWH

Tom Tenies MWH

Ben Baker Austgas

Larry Campbell BSRP

2140 Discussion w/ Tom Tenies

Both ISVE systems are operating.  
OFCOA ISVE going through Dohr  
Unit. OFCA ISVE going thru  
Globe Unit.

Still finding small problems  
resulting from lightning strikes  
last weekend.

Hope to have both units  
working in Auto for weekend

03120p Roll 46, Photo 5 Looking N at  
new retaining wall on W side  
of break room

Roll 46, Photo 6 Looking N at  
new retaining wall on E side  
of break room

Roll 46, Photo 7 Looking W at

JM Campbell

(143)

8/8/03

new retaining wall at S side  
of break room

0335 Roll 46 Photo 8 Looking SW from  
NE corner of OFCA SBPA near  
ACS Unloading deck showing 10'x  
erosion gully. Most erosion  
gullies have been repaired

0336 Roll 46 Photo 9 Looking E along  
N side of fence around E SBPA  
ISVE ~~area~~ cover. Note each  
sect. of fencing is secured w/  
rubber strips & sand bags to  
minimize movement during storms

0340 Inspected cover in OFCA  
No apparent increase in erosion  
gullies on W side of OFCA cover.  
Tom Tenies reported that ~~area~~  
Midwest provide a bid this week  
to fix OFCA cover erosion gullies

03415 Left site for Don

LJM Campbell

(144)

8/7/03

Jeff Peters

1000 BiWeekly Construction Mtg - BVSPC  
participated via conference call.

Participants:

Tom Tinics MWH at site

Lee Oross MWH at site

via phone:

Chris Daly MWH John Pohl MWH

Kevin Adler EPA Aaron Potts Environ

HHS: No incidents; mosquitos still problem  
at site; Ryan Construction onsite one  
day last week and this week. Rain  
storms at site

GWTP: Currently at 10 gpm, lightning  
struck plant last Friday - MWH found  
everything down last ~~at~~ P on Monday.  
MWH not paged. GWTP troubleshooting  
70% resolved - hoping to finish troubleshooting  
this week.

ONCA/OECA ISVE: operated ONCA ISVE  
with Thermox 2 on 2 off last week and  
began consistent operation this week.  
Plan to start PSVP monitoring today  
and to collect influent + effluent  
laboratory samples. OECA ISVE running  
intermittantly on Burr thermox 1 unit

Jeff Peters

(145)

8/7/03

MWH finding problems in programming for  
unit - possibly related to lightning strike.

General Construction: Ryan out onsite and  
completed curb last Monday. Ryan out  
1 day this week to repair damage it caused  
to ACS break bldg - to finish next week. -  
80% complete

Look Ahead: GWTP Maintenance 8/18 -

- T-102 cleanout - confined space

- Clean clarifier

- replace sand in 1500 gal sand vessels

- pull air lift from large sand filter

OECA Erosion: MEL submitted bid to MWH;  
ECI to add topsoil in thin areas and reseed.  
Work to occur in end of August.

GW sampling in September.

HHS Look Ahead: Confined space during  
cleanout of T-102. Traffic during OECA cover  
activities.

1030 Mtg conclude - Next Mtg August 21 @ 10 AM.

Jeff Peters  
8/14/03



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8/18/03 JEP

0730 Arrive Onsite, Sunny, clear, NW wind, 70s.

Personnel Present:

Lee Orosz MWH

Dan Petrich IES

Terrence Jones IES

Mike ~~Petrich~~ Petrich IES

Tim Kirkland Austgen

Craig Livingston - Cochrane Compressor

Leigh Peters BVSFC.

GWTP and ISVC systems down. MWH and IES performing maintenance on plant. IES cleaning aeration/equalization tank T102. MWH also to clear sand filters.

Lee Orosz reported cochrane changing out a compressor head, Austgen helping with miscellaneous work in GWTP, ECI to be out today for low, thin topsoil cover areas on OFCA engineered cover. L. Orosz also reported that MWH installed new pH probe into Thermo 2 on Friday morning. MWH to calibrate probe; but unit should be up and running shortly once complete.

0810 IES preparing for T-102 cleanout, IES pumping excess water from tank. IES reported that it will ventilate with fan.

JEP

8/18/03

JEP

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and determine respiratory protection. IES is prepared for supplied air. IES also filling out permit for confined space.

0815 Area Survey onsite to perform surveys of ONCA SBPA top of gravel, catchbasins, etc.

ECI onsite to stake out OFCA cover for areas of fill. Landscapers to be onsite after lunch. ECI hopes to be done by noon tomorrow - need to add ~ 2 inch in x greater acre area.

0930 IES still pumping liquor from T102. IES reported that it expects to start removing sludge around 1030.

0935 Went to ONCA, observed Area Survey surveying points on SBPA cover. Observed MWH has painted ID on flushmount well concrete pad. Cover gravel looks good - no erosion in cover observed. Did observe pieces of netting placed on S portion of cover; west of access road to minimize erosion damage at catch basins. MWH took at all basin locations.

0955 Roll 47 Photo 1 facing SE of geo netting placed on cover near SVE-BD and SVE-B2.

1005 Roll 47 Photo 2 facing S of IES ventilating T102. IES reported that it observed some H<sub>2</sub>S readings inside tank.

JEP

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8/18/03

J. E. Petrich

- 1013 Roll 47 Photo 3 facing N of IES donning PPE for entry into T102
- 1015 Roll 47 Photo 4 facing NW of IES entering T102. IES resumed ventilating tank after entry and monitored LEL, O<sub>2</sub>, H<sub>2</sub>S and CO.
- 1025 Dan Petrich reported O<sub>2</sub> at 21.2% but everything else OK. LEL < 10%, <sup>ppm</sup> CO, H<sub>2</sub>S ppm
- 1045 Went to OFCA, loads of dirt delivered by Arctogen, surveyors surveying and staking extent of fill areas.
- 1120 L. Orasz reported IES breaking for lunch; to continue work afterwards. IES still trying to pump down the tank.
- 1145 Returned to GWTP. IES reported another 1-inch of water remaining to pump out. Then IES to remove sludge.
- 1215 IES continuing to pump out water from T102.
- 1225 Roll 47 Photo 5 facing NW of IES pumping <sup>water</sup> sludge from T102.
- 1250 IES reported that it swapped off the aerators and checked the plugs to make sure everything is clear.
- 1310 Roll 47 Photo 6 facing S of Cochran installing new compressor head.

J. E. Petrich

8/18/03

J. E. Petrich

(149)

- 1325 Went to OFCA and observed where stakes placed for additional fill. Areas include near access road; K-P area (N), NE portion of well field N of blower shed. Also additional fill needed near swale 5; west of blower shed.
- 1330 Roll 47 Photo 7 facing N of topsoil and stakes in background for areas that need fill. ECI placing fill in 25-foot square patch around stakes.
- 1345 T. Tines reported MEI likely to be on-site next week for OFCA engineered cap maintenance. MWH waiting for ECI to be complete with its work prior to MEI coming onsite. MWH also reported it hoped to have GWTP back up & running on Wednesday.
- 1400 Left site for day

J. E. Petrich  
8/18/03

(150)

21 August 2003

10:00 Biweekly Construction mtg.

Participants:

o site: Lee Orosz + Chris Daly  
 via phone  
 o MWH office: Todd Lewis & John Pohl  
 in car via phone: Rob Adams  
 v. phone Kevin Allen EPA  
 Larry Humphrey BUSPC

H&S - No incidents in last 2 weeks  
 Even though there had been much  
 activity at site for maint. activities  
 in GWTP. Confined space entry into  
 various tanks in GWTP. Still  
 doing maintenance. Temp. has been  
 v. high. Have cooling sta. w/ Gatorade.

GWTP Have had electrical problems  
 because of lightning strike 2 wks  
 ago. Plant down this week for  
 maintenance since Monday. Remaining  
 work is to clean sand filter pump.  
 Expect to be operational by Friday or  
 next Monday latest. Have solved  
 about 95% of electrical problems  
 Previous week had been pumping  
 ~10 gpm Only from MW56 and 10C

Jim Campbell

(151)

Couldn't get OFCA wells to pump  
 regularly. Have that problem fixed  
 and will now pump from all wells.  
 Because of reduced pumping since storm,  
 water table elev in ONCA has rising. Not  
 as much rise in OFCA

ISUE Both systems were operating  
 but Thermox 1 (Dore) went down last  
 evening. Now bringing it back on line.  
 Thermox 2 (Glabell) working fine +  
 pulling vapors from ONCA SBPA

OFCA - ECI onsite Mon & Tue  
 placing topsoil in areas of OFCA  
 Cap that is too thin - based on survey  
 data. ECI imported topsoil,  
 spread & compacted it, seeded +  
 covered w/ straw. ECI will re survey.

~~Two~~ Base ~~Attn~~ Ryan Const. completed  
 repairs to Aes Brook Dam Wall. Still  
 need to replace damaged door.

Look Ahead

Next week: MWE to mobilize to site and  
 repair OFCA erosion areas. MWH will  
 issue ~~their~~ response to comments on erosion Friday  
 MWH ~~has~~ will have a survey of

Jim Campbell

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8-21-03

ONCA gravel surface As-built.  
MWH will meet w/ Tom Furkham  
ACES to discuss ACES truck access  
over gravel to loading dock, etc.

- Some fine Rock is eroding down  
slope into storm sewer drains -  
will continue maintenance &  
that fill Asphalt pavement placed.
- Nano filter is scheduled for  
shipment on 9/5. - Will need to  
reconfigure some piping for nanofilter
- MWH will delay paving in Asphalt  
in ONCA SBPA Camp till next  
spring. The ONCA 15UG wells  
are not producing as well as  
expected.

Next meeting - Thurs Sept 4

B.25 Mtg over

*L. M. Campbell*

(153)

21 Aug 2003

0845 Arrive on site.  
Partly Cloudy, humid, hot SE F  
Personnel on site  
Lee Cross MWH  
Steve Field MWH  
Dan Lawson "  
Tony Ferrini "  
Tom Mallory "  
Darryl Colver " (Still some)  
Adele Sands III " "  
Jerry Mann Ryker  
Terry Fink "  
Todd Lewis MWH  
Laurie Campbell BUSE

0900 Observed Ryan adding PVC piping  
so that water from T<sub>2</sub> can be supplied  
to either thermox unit 1 or 2

0910 Roll 47 Photo 8 Looking Southwest  
Showing Ryan installing inlets  
piping from Tank T<sub>2</sub> to thermox 1 & 2

0915 Roll 47 Photo 9 Looking SW - Same  
as photo 8, but w/ Flash

0930 Roll 47 Photo 10 Looking W out toward  
dry in Spade 4 for 4" dia pipe to drain swells  
near MWH

(154)

E/26/03

- 0940 Roll 47 Photo 11 Looking N  
at Suck 3 showing some  
soil. Soil to be relocated away  
from Suck to Area near wood pile
- 0945 Roll 47 Photo 12 Looking N  
at pipes under elect conduit  
Pipes to be extended
- 0947 Roll 47 Photo 13 Looking S  
at Suck 1. MED cleared out  
30.1 - Now adding new riprap
- 0950 Roll 47 Photo 14 Looking S  
at OFCA - Straw covered area  
is location of road topsoil to  
be planted requires thickening
- 1000 Disc 07. Todd has 5 GWT  
currently in recirculation mode.  
Hope to restart treatment later today.  
Left pump on Sand filter is  
stuck - Can't remove by pulling.  
Will have to remove sand (prob.  
next week).

Thermax units both restarted  
this morning - coming up to operating  
Temp. Will then pull vapors  
from both ONCA & OFCA SVE units

Jim Campbell

(155)

E/26/03

- Todd indicates Thermax 1 has  
operational problem. Tends to shut  
down when reaches operating Temp  
Thermax 2 works pretty well now.  
Todd expects to get large Feb  
grinder in next couple weeks  
to grind up tree trunks in OFCA.
- 1030 Roll 47 Photo 15 Looking N  
in ONCA showing points plastic  
grid placed in vicinity of catch  
basin in effort to control erosion  
of grade
- 1100 Matt started pulling OFCA/ONCA  
vapors into Thermax 2. Temp rose  
gradually until high conc. vapor  
from ONCA were diluted with lower  
conc vapors from OFCA
- 1115 Roll 47 Photo 16 Looking E showing  
4" slotted, filter wrapped flexible  
pipe to be installed in trench in  
Suck 4.
- 1120 Roll 47 Photo 17 Looking SE in OFCA  
showing straw covered areas where  
additional topsoil & seed were placed  
last week

Jim Campbell



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8/26/03

- 1125 Roll 47 Photo 15 Looking SE  
at N. end of extended pipes  
under electric conduit in OPCA
- 1135 Roll 47 Photo 19 Looking SW  
showing Trencher digging trench  
for 4" flexible pipe at E end  
of Swale 4
- 1145 Roll 47 Photo 20 Looking S  
showing MEI removing excess  
soil from Swale 3. & relocating  
it to vicinity of tree stumps
- 1155 Left Site

*Don Campbell*

9/4/03

J. S. Peters

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10:00 BiWeekly Construction Meeting

Attendees:

Lee Brosz MWH  
Prabakar Kasarabada IDEM

Via Phone:

Kevin Adler EPA Leigh Peters BVSPC  
Rob Adams MWH Jon Pohl MWH  
Chad Smith MWH Mike Mesarch MWH

H+S: No issues; IES removed pump from  
large sand filter; tied off w/ harness. MEI  
working on OFCA; hot weather water stations  
bug/bee problem - called exterminator and resolved

GWTP: currently in recirculation since 8/25.  
down week of 8/18 for maintenance. Biomass  
potentially deceased - MWH sampled and will  
have results this week. MWH may need to  
provide outside seed. MWH to evaluate  
switching to smaller biozone. Carbon  
fouled w/ biomass - changeout scheduled  
9/15. MWH discharged 1 day & collected  
compliance sample. Nanofilter to be delivered  
9/5. Austgen/Ryan to install Monday.

ISVE: Thermox 2 at 100% since 8/27; processing  
DNCA; added OFCA vapors yesterday. All  
DNCA wells open; 17 OFCA wells online

*J. S. Peters*





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #1

Date: 08-18-03 Time: 09:55

Photographer: Leigh Peters

Description: Photo facing southeast showing the geonet placed over the ONCA SBPA catch basin located between SVE-80 and SVE-82 to minimize erosion of the gravel.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #2

Date: 08-18-03 Time: 10:05

Photographer: Leigh Peters

Description: Photo facing south showing IES ventilating the aeration/equalization tank T-102 prior to entering the permit required confined space for tank cleaning.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #3

Date: 08-18-03 Time: 10:13

Photographer: Leigh Peters

Description: Photo facing north showing IES donning PPE for entry into the aeration/equalization tank T-102.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #4

Date: 08-18-03 Time: 10:15

Photographer: Leigh Peters

Description: Photo facing northwest showing IES entering the aeration/equalization tank T-102 for tank cleaning.





Site: American Chemical Services, Inc.

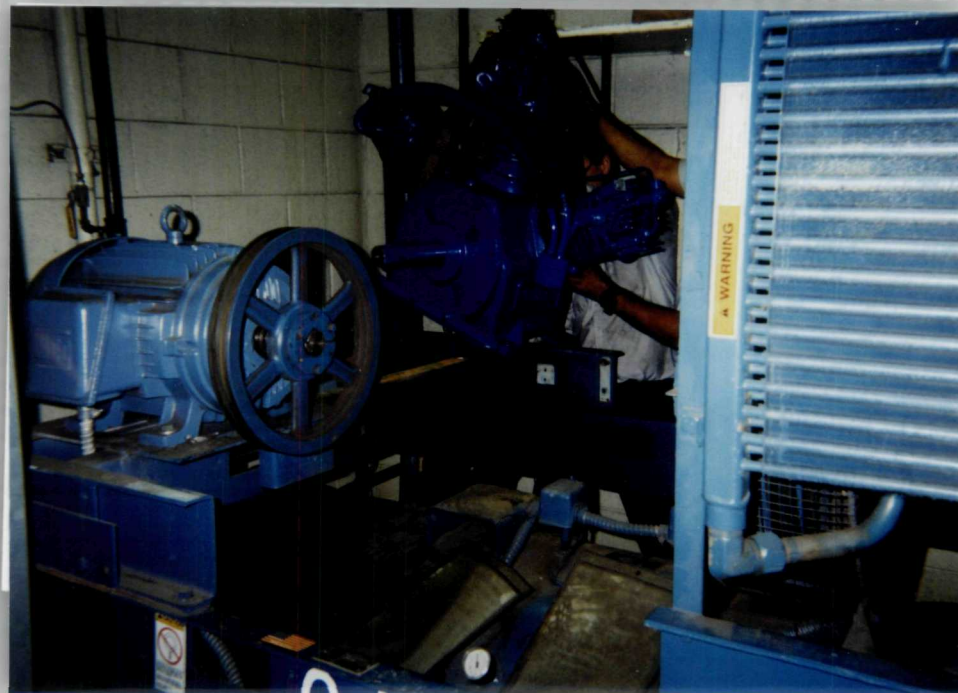
Proj. #: 46526

Roll: 47 Photo #5

Date: 08-18-03 Time: 12:25

Photographer: Leigh Peters

Description: Photo facing northwest showing IES pumping excess water from the aeration/equalization tank T-102.



Site: American Chemical Services, Inc.

Proj. #: 46526

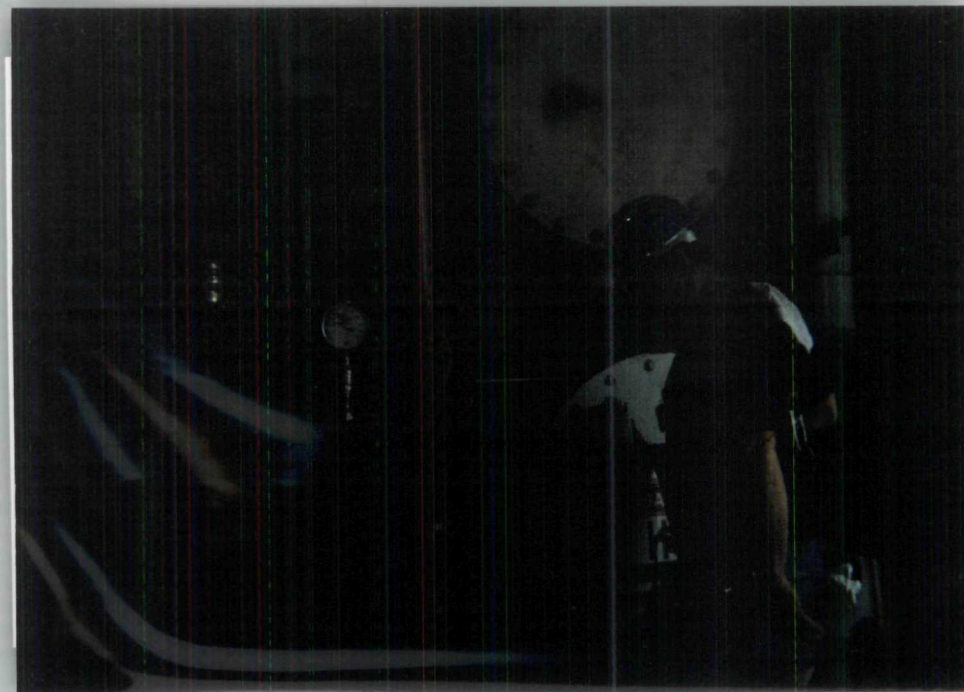
Roll: 47 Photo #6

Date: 08-18-03 Time: 13:10

Photographer: Leigh Peters

Description: Photo facing south showing Cochrane Compressor installing a new compressor head on an air compressor in the GWTP.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #7

Date: 08-18-03 Time: 13:30

Photographer: Leigh Peters

Description: Photo facing west showing the topsoil for placement on the OFCA engineered cover and stakes marking the locations in former swale 5 where additional topsoil is needed.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #8

Date: 08-26-03 Time: 09:10

Photographer: Larry Campbell

Description: Photo facing southwest showing Ryan Construction installing water piping from tank T-1 to Thermal Oxidizer Units 1 and 2.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #9

Date: 08-26-03 Time: 09:15

Photographer: Larry Campbell

Description: Photo facing southwest showing Ryan Construction installing water piping from tank T-1 to Thermal Oxidizer Units 1 and 2.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #10

Date: 08-26-03 Time: 09:30

Photographer: Larry Campbell

Description: Photo facing west showing the trench dug in swale 4 for the 4-inch-diameter perforated piping to drain swale 4.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #11

Date: 08-26-03 Time: 09:40

Photographer: Larry Campbell

Description: Photo facing north at swale 3 showing the soil that has been removed from the swale and will be relocated to the area near the wood pile on the OFCA.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #12

Date: 08-26-03 Time: 09:45

Photographer: Larry Campbell

Description: Photo facing north showing the piping that is to be extended located underneath the electrical conduit in the OFCA.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #13

Date: 08-26-03 Time: 09:47

Photographer: Larry Campbell

Description: Photo facing south at swale 1 showing where MEI removed the soil from the swale and is replacing the riprap.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #14

Date: 08-26-03 Time: 09:50

Photographer: Larry Campbell

Description: Photo facing south showing the straw covered area on the OFCA engineered cover where additional topsoil was placed by ECI to meet the design thickness.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #15

Date: 08-26-03 Time: 10:30

Photographer: Larry Campbell

Description: Photo facing north in the ONCA showing the geonet placed in the vicinity of the catch basin near SVE-82 in order to minimize gravel erosion.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #16

Date: 08-26-03 Time: 11:15

Photographer: Larry Campbell

Description: Photo facing east showing the 4-inch-diameter slotted, filter wrapped flexible pipe to be installed in the trench in swale 4.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #17

Date: 08-26-03 Time: 11:20

Photographer: Larry Campbell

Description: Photo facing southeast showing the straw covered area on the OFCA engineered cover where additional topsoil was placed by ECI to meet the design thickness.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #18

Date: 08-26-03 Time: 11:25

Photographer: Larry Campbell

Description: Photo facing southeast showing the north end of the pipes located below the electrical conduit crossing swale 3 that were extended.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #19

Date: 08-26-03 Time: 11:35

Photographer: Larry Campbell

Description: Photo facing southwest showing MEI trenching for the placement of the 4-inch-diameter flexible pipe in swale 4.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 47 Photo #20

Date: 08-26-03 Time: 11:45

Photographer: Larry Campbell

Description: Photo facing south showing MEI removing excess soil from swale 3 and relocating the soil to the vicinity of the stockpile of tree trunks.